

WHAT IS CLAIMED IS:

1                   1.     A laser arbor for a saw having a spindle that rotates a saw  
2 blade relative to a non-rotating portion of the saw, the laser arbor comprising:  
3                   a housing;  
4                   a laser light disposed at least in part within the housing;  
5                   a circuit electrically connected to the laser for providing power to the  
6 laser, the circuit providing power from a voltage source that includes a portion  
7 secured to the non-rotating portion of the saw.

1                   2.     The laser arbor for a saw having a spindle of claim 1 wherein  
2 the circuit further comprises a generator having a rotor associated with the spindle  
3 and a stator associated with the non-rotating portion of the saw, whereby electrical  
4 energy is generated as the spindle rotates the rotor relative to the stator.

1                   3.     The laser arbor for a saw having a spindle of claim 1 wherein  
2 the circuit further comprises a generator having a permanent magnet secured to a  
3 fixed guard and an arcuate coil section rotated by the spindle.

1                   4.     The laser arbor for a saw having a spindle of claim 1 wherein  
2 the circuit further comprises an inductively coupled power source comprising a first  
3 induction coil that is rotated by the spindle and a second induction coil that is on the  
4 non-rotating portion of the saw, and wherein power for the laser light is provided  
5 by the inductively coupled power source.

1                   5.     The laser arbor for a saw having a spindle of claim 1 wherein  
2 the circuit further comprises a power source electrically connected by slip ring  
3 contacts that establish electrical contact between the power source and the circuit,  
4 wherein the slip ring contacts comprise a first set of contacts that rotate with the saw  
5 blade and a second set of contacts that are stationary which contact the first set of  
6 contacts.

1                   6.     The laser arbor for a saw having a spindle of claim 1 wherein  
2     the circuit further comprises a power conditioning circuit that provides power within  
3     a predetermined voltage range to the laser.

1                   7.     The laser arbor for a saw having a spindle of claim 1 wherein  
2     a fixed guard is part of the non-rotating portion of the saw.

1                   8.     A saw comprising:  
2                   a motor having a spindle;  
3                   a blade secured to the spindle and rotated by the motor to cut a  
4     workpiece;  
5                   a laser arbor having a housing secured to the spindle for rotation with  
6     the blade;  
7                   a light source disposed in the housing, the light source emitting a  
8     narrow beam of light adjacent the blade for providing a visual indication of the  
9     alignment of the blade with the workpiece; and  
10                  a generator electrically connected to the light source for providing  
11     power to the light source, wherein the generator includes a rotor associated with and  
12     rotated with the housing and a stator secured adjacent to the housing, the rotor being  
13     rotated by the motor relative to the stator for generating a electrical power for the  
14     light source.

1                   9.     The saw of claim 8 wherein the rotor is an electrical coil.

1                   10.    The saw of claim 9 wherein the stator is an electrical magnet.

1                   11.    The saw of claim 9 wherein the stator is a permanent magnet.

1                   12.    The saw of claim 9 wherein the rotor is electrically connected  
2     to a power conditioning circuit that provides power directly to the light source.

1                   13.    The saw of claim 8 wherein the light source is a LED laser.

1 14. A saw comprising:  
2 a motor having a spindle;  
3 a blade secured to the spindle and rotated by the motor to cut a  
4 workpiece;  
5 a laser arbor having a housing secured to the spindle for rotation with  
6 the blade;  
7 a light source disposed in the housing, the light source emitting a  
8 narrow beam of light adjacent the blade for providing a visual indication of the  
9 alignment of the blade with the workpiece; and  
10 an inductively coupled power source electrically connected to the  
11 light source, wherein the power source includes a first induction coil associated with  
12 and rotated with the housing and a second induction coil secured adjacent to the  
13 housing, the second induction coil inducing voltage in the first induction coil to  
14 provide power to the light source.

1 15. The saw of claim 14 wherein the rotor is electrically  
2 connected to a power conditioning circuit that provides power directly to the light  
3 source.

1 16. The saw of claim 14 wherein the light source is a LED laser.

1 17. A saw comprising:  
2 a motor having a spindle;  
3 a blade secured to the spindle and rotated by the motor to cut a  
4 workpiece;  
5 a laser arbor having a housing secured to the spindle for rotation with  
6 the blade;  
7 a light source disposed in the housing, the light source emitting a  
8 narrow beam of light adjacent the blade for providing a visual indication of the  
9 alignment of the blade with the workpiece; and  
10 a generator electrically connected to the light source for providing  
11 power to the light source, the generator having a permanent magnet secured to a  
12 fixed guard and a coil rotated by the spindle.

- 1                    18.    A saw comprising:  
2                    a motor having a spindle;  
3                    a blade secured to the spindle and rotated by the motor to cut a  
4    workpiece;  
5                    a laser arbor having a housing secured to the spindle for rotation with  
6    the blade;  
7                    a light source disposed in the housing, the light source emitting a  
8    narrow beam of light adjacent the blade for providing a visual indication of the  
9    alignment of the blade with the workpiece; and  
10                  a power source electrically connected by a plurality of slip ring  
11    contacts that establish electrical contact with the light source, wherein the slip ring  
12    contacts comprise a set of rotating contacts that rotate with the blade and a set of  
13    fixed contacts that are stationary and are mounted on the saw to contact the first set  
14    of contacts.